

County of Loudoun

Office of Transportation Services

MEMORANDUM



DATE: May 15, 2008

TO: Marchant Schneider, Project Manager, Department of Planning

THRU: Art Smith, Senior Coordinator

FROM: George Phillips, Senior Transportation Planner

SUBJECT: Loudoun County Public Schools-Lenah Property SPEX 2008-0017 & CMPT 2008-0007

Location: South and east sides of Lenah Road (Route 600) beginning approximately 1,500 feet south of Route 50. (See Attachment 1)

Background

The applicant, the Loudoun County School Board, is requesting approval of a Special Exception and Commission Permit to allow a high school and a middle school in the TR-1 district. The applicant has submitted a special exception plat dated February 14, 2008 by Bowman Consulting, a statement of justification also dated February 14, 2008 from the applicant and a traffic study dated February 15, 2008 from Gorove/Slade Associates Inc. Based on current 7th Edition ITE trip rates noted in the traffic study, the proposed middle school and high school combine to generate 1,480 a.m. peak hour, 455 p.m. peak hour and 4,971 daily vehicle trips.

Existing and Proposed Road Network

The proposed site access includes two access points onto Lenah Road and a proposed future entrance on the planned Lenah Loop Road. The existing volumes

and LOS are also included in Attachments 2 and 3 from the applicant's traffic study.

Route 50- is currently a two lane divided road in the vicinity of the site with a 55 mph speed limit. It does not currently include turn lanes at the unsignalized intersection with Lenah Road. Route 50 includes turn lanes at major intersections and it carries 18,000 annual average daily vehicle trips based on the latest available VDOT traffic data from 2006.

Route 50 is included in the Countywide Transportation Plan (CTP) as a 2-lane undivided rural minor arterial west of Lenah Road and a four lane median divided road east of Lenah Road. Separate left and right turn lanes are recommended at all at-grade intersections. Bicycle accommodations are to be considered in design and may require additional right-of-way.

Route 600, Lenah Road/Planned Lenah Collector/Loop Roads- Lenah Road is a paved local rural road approximately 16-18 feet wide between Route 50 and Lenah Run Circle South Driveway and unpaved south to Braddock Road. Based on the latest available VDOT traffic count data from 2006 with actual counts from March 1, 2002 for this road, Route 600 carries 650 annual average daily vehicle trips. Applying the 10% K factor to the combined a.m. and p.m. peak hour counts from the traffic study, it is estimated that the current traffic is approximately 1,200 daily vehicle trips. The remaining segment of existing unpaved Lenah Road is not included on the CTP and is to remain as a local road. The current CTP adopted in 2001 calls for the northern portion, approximately 2,400 linear feet, of Lenah Road to be replaced by the planned Lenah Connector Road. This was to be a rural four lane undivided rural collector within a 90 foot wide right of way with a 40 mph design speed between Route 50 and the planned Tall Cedars Parkway and include turn lanes at all major intersections. It will align in a north south direction and connect Route 50 and Braddock Road and would traverse the eastern portion of the site. Tall Cedars Parkway is planned to intersect with the Lenah Connector near the south eastern tip of the proposed site. With the demise of the Transition Area CPAM and the resulting decrease in housing units, the Lenah Collector Road has become the Lenah Loop Road in the Draft 2007 CTP. It no longer extends to Prince William County, which has shown no interest in a connection, and it is now shown looping back to North Star Boulevard in Loudoun County. The Lenah Loop Road will be a two-lane rural collector road within a 70 foot wide right of way and include a 40 mph design speed.

Braddock Road, Route 705- is a paved road approximately 16-18 feet wide in the vicinity of Lenah Road. The latest available VDOT traffic counts, from January 10, 2005 indicate 1,300 daily vehicle trips in the vicinity of Lenah Road. The CTP calls for the portion of Braddock Road east of Lenah Road to be a rural four lane undivided minor collector road within a 90 foot wide right of way. It is to include a 40 mile per hour design speed and include right and left turn lanes at major intersections. The portion of Braddock Road northwest of Lenah Road to Route 15 is to remain as a local road

Transportation Comments (See Attachments 4-7 for future traffic and LOS forecasts from the applicant's traffic study)

1. While a roundabout was considered by VDOT at the Route 50/Lenah Road intersection, funding has not been approved. Therefore, in order to facilitate safe travel on Route 50 and accommodate the anticipated site traffic turning onto Lenah Road from Route 50, intersection improvements are necessary. These could take the form of the roundabout or new left and right turn lanes. A traffic signal is shown to be needed. Currently, no funds are available for the design and installation of this signal.
2. At the present time, the proposed site is served by the unpaved Lenah Road south to Braddock Road. The traffic study notes that a majority of the over 4,900 daily vehicle trips will access the site to and from the south via Braddock Road. The applicant's traffic study also notes that Greenvest LLC is to provide a portion of the Lenah Loop Road between Braddock Road and the site as a two lane undivided road. The SBPL 2008-0002, Lenah, does show a new road, Lenah Village Drive, running along the planned Lenah Loop Road alignment and serving the schools. If this road segment is not in place, the applicant will need to provide this paved connection or investigate paving existing Lenah Road to the south.
3. In order to facilitate the construction of the planned Lenah Loop Road along the eastern boundary of the site, the applicant needs to dedicate 35 feet of right of way along the full eastern property edge plus provide all necessary construction related easements including drainage, utility and grading easements. Additional right of way also needs to be dedicated to accommodate separate right and left turn lanes at the planned Lenah Loop Road/Tall Cedars Parkway intersection.

4. In the event the applicants for the Lenah subdivision 2008-0002 do not construct the Lenah Loop Road, the applicant needs to provide construction of two paved lanes of the Lenah Loop Road along the frontage of their site which would include the realignment of the existing east-west portion of Lenah Road into the Lenah Loop Road. This also includes turn lanes at the proposed site entrance at future Tall Cedars Parkway. If the two lane on-site and off-site construction of the Lenah Connector is constructed by others south to Braddock Road, then the applicant should provide the other two lanes along their site frontage and two lanes north to Route 50.
5. If not provided under SBPL 2008-0002, the applicant needs to provide two paved lanes along the full frontage of existing Lenah Road plus all VDOT required turn lanes at the proposed site entrances.
6. The applicant needs to provide pedestrian/bike trail facilities parallel to existing Lenah Road and the Lenah Loop Road along the site frontage.
7. The number of parking spaces shown on the concept plan seems high. What are the Ordinance parking requirements for the two schools combined? Please clarify. OTS defers to the Department of Building & Development of Building & Development on this possible issue.

Conclusion/Recommendation

The following transportation improvements are needed to serve the schools upon their openings:

- A paved Lenah Road to the schools entrances and a paved Lenah Loop Road (Lenah Village Drive). Both improvements are shown as being constructed by Greenvest as part of SBPL 2008-0002. However, guarantees need to be in place to make sure the construction will occur in the appropriate time frame.
- Intersection improvements at Route 50/Lenah Road. This would be either a roundabout, which OTS prefers, or turn lanes and a traffic signal. There is currently no funding for these improvements and the proposed fair share contributions by the applicant are inadequate.

Further discussion is needed with the applicant to work out these issues.

C Drive/Lenah/Loudoun County Public Schools/School Board SPEX 2008-0017

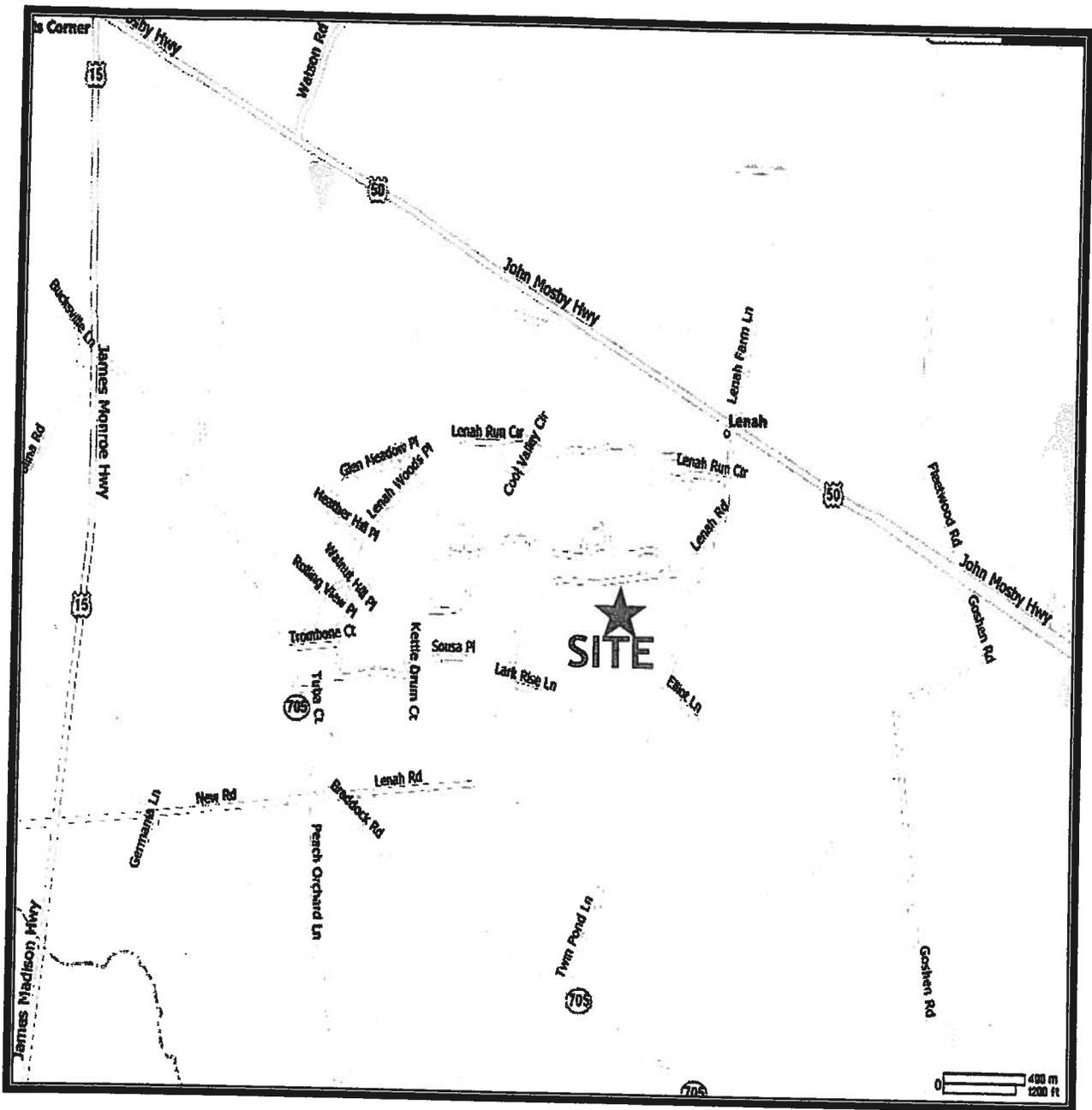
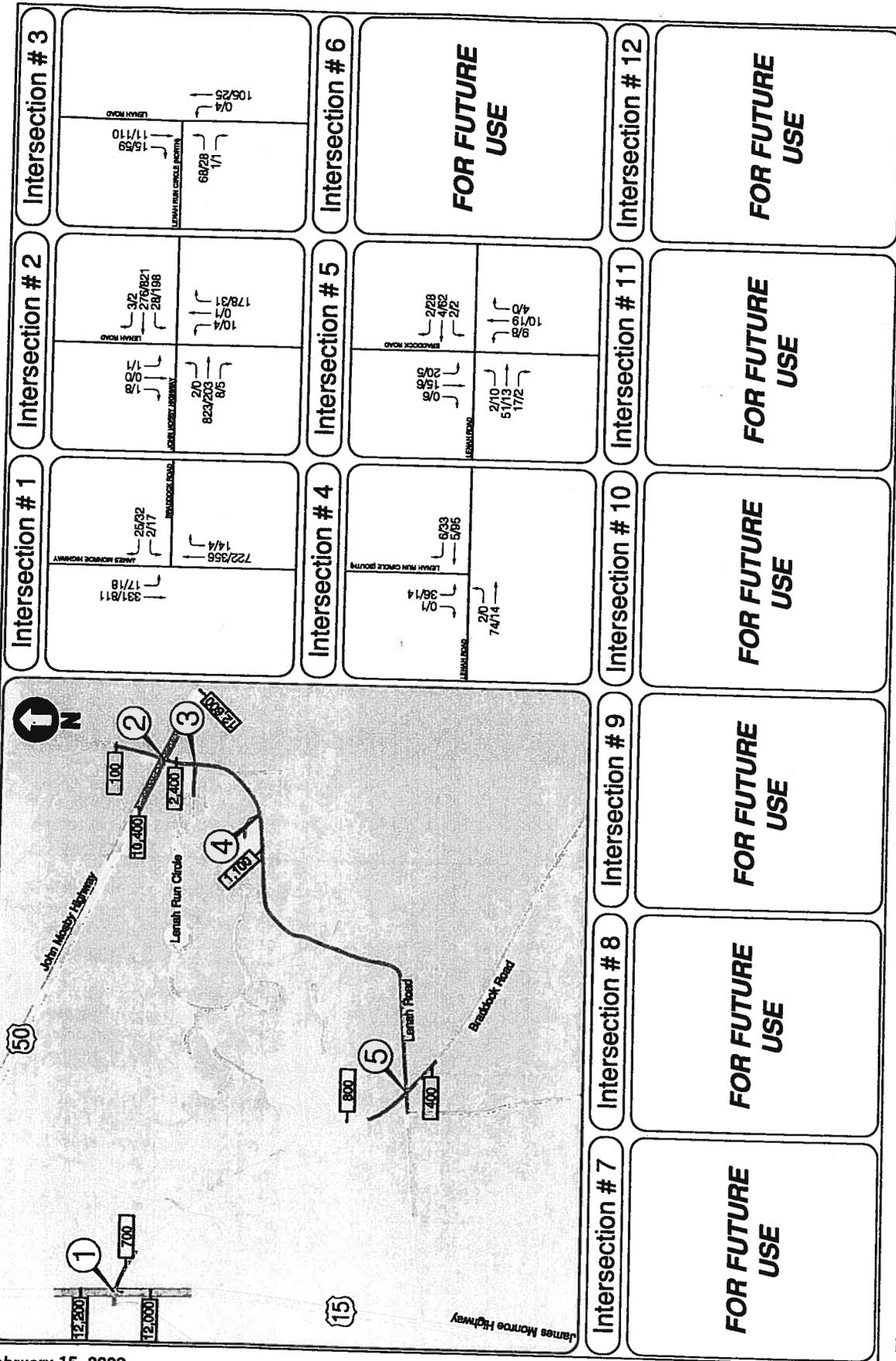


Figure 1: Area Map and Site Location

February 15, 2008

Attachment 1

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Legend

- Existing Roadway Network
- FOR FUTURE USE
- Peak Hour Traffic Volumes
- Average Daily Traffic Volumes

Figure 4
Existing (2007) AM/PM Peak Hour Traffic Volumes

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LVALELASTI.MXD

February 15, 2008



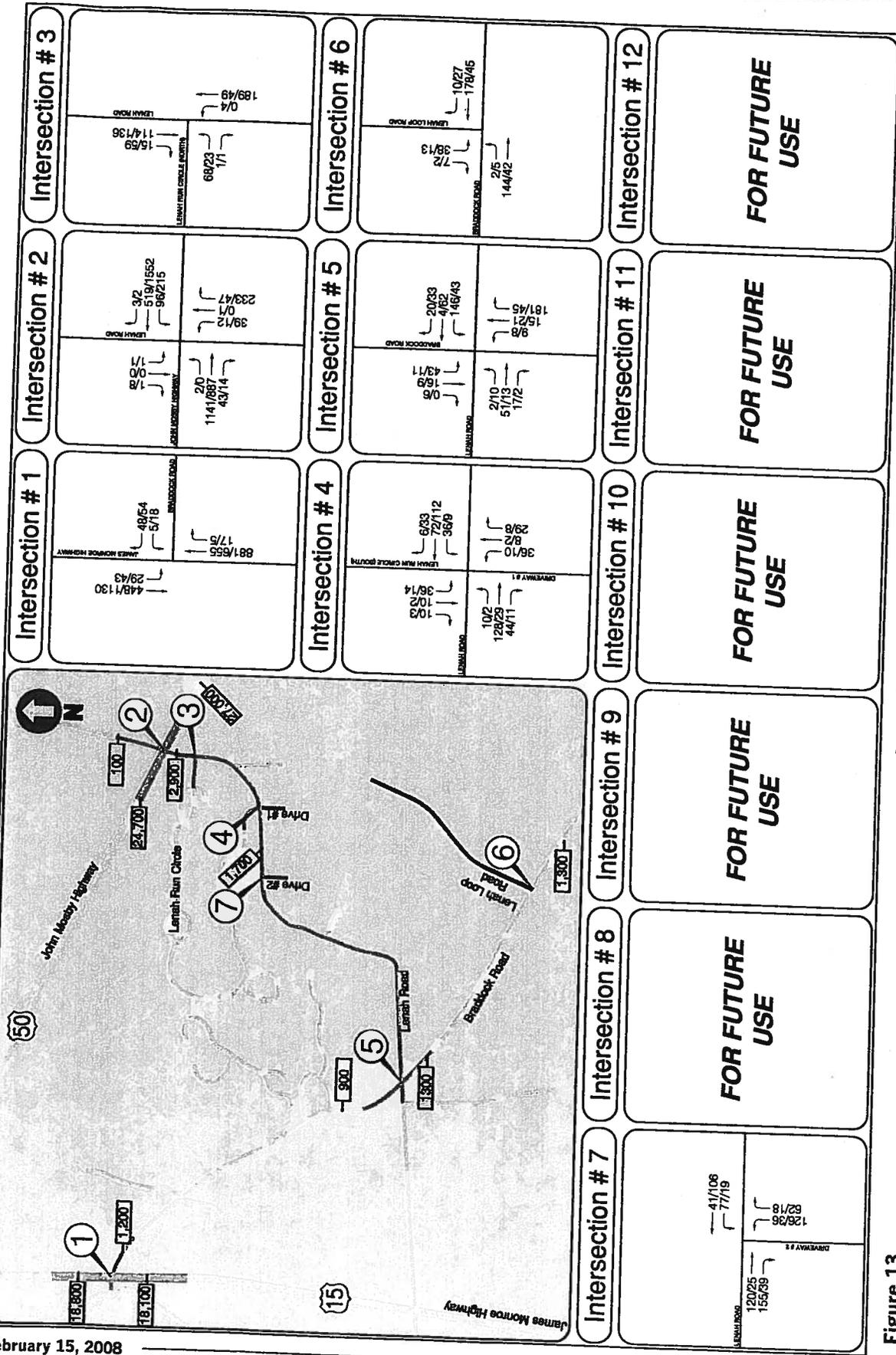
Existing Conditions Capacity Analysis

Capacity analyses were performed at the intersections contained within the study area during the weekday morning and afternoon peak hours, under the existing conditions. Intersection capacity analyses were performed using *Synchro version 6* based on the latest Highway Capacity Manual (HCM 2000) data and methodology.

The results of the intersection capacity analyses for the existing conditions are summarized in Table 1. The description of the different LOS and delay and the detailed analysis worksheets for the existing conditions are included in the Technical Appendix.

Table 1: Existing (2007) Intersection Capacity Analysis

Intersection (Approach/Movement)	Existing Conditions (2007)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
US Route 50 and Lenah Road				
Overall (Unsignalized)				
Eastbound Left	N/A	N/A	N/A	N/A
Westbound Left	A	0.0	A	0.0
Northbound Approach	A	1.4	A	3.8
Southbound Approach	E	35.5	C	16.1
	E	49.2	C	20.5
Mitigation (Add a Signal)				
Overall (Signalized)				
Eastbound Approach	B	11.6	D	36.8
Westbound Approach	B	12.8	A	2.9
Northbound Approach	A	4.6	D	44.7
Southbound Approach	B	17.7	B	14.9
	B	12.2	B	14.5
Lenah Road and Lenah Run Circle North				
Overall (Unsignalized)				
Eastbound Approach	N/A	N/A	N/A	N/A
Northbound Left	A	9.5	A	9.5
	A	0.0	A	1.1
Lenah Road and Lenah Run Circle South				
Overall (Unsignalized)				
Eastbound Approach	N/A	N/A	N/A	N/A
Southbound Left	A	0.2	A	0.0
	A	9.2	A	9.3
US Route 15 and Braddock Road				
Overall (Unsignalized)				
Westbound Approach	N/A	N/A	N/A	N/A
Southbound Left	C	15.6	C	17.8
	A	0.7	A	0.5
Lenah Road and Braddock Road				
Overall (Unsignalized)				
Eastbound Approach	N/A	N/A	N/A	N/A
Westbound Approach	A	9.7	A	9.6
Northbound Left	A	9.4	A	9.6
Southbound Left	A	2.9	A	2.2
	A	4.2	A	2.2



Legend

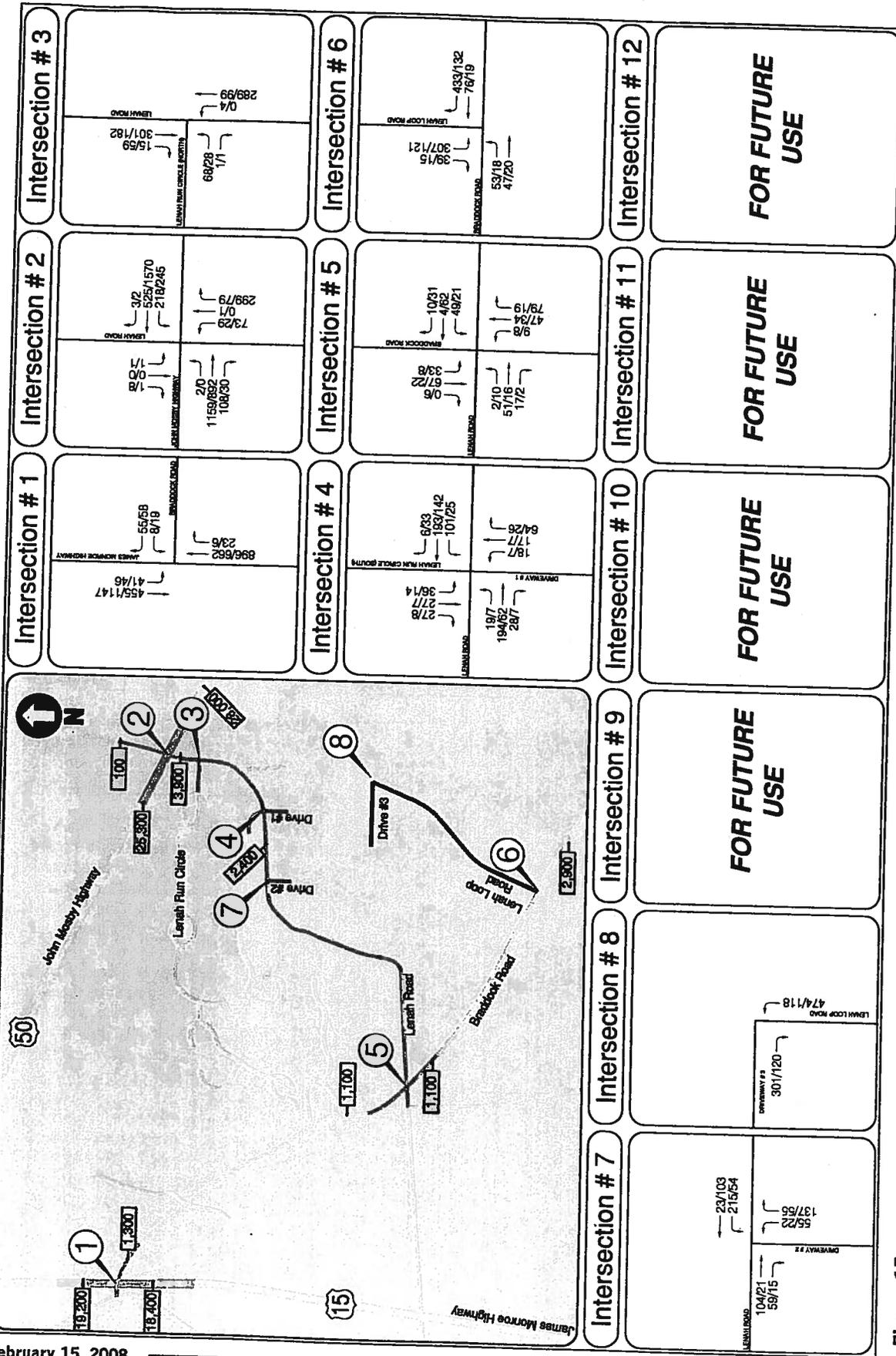
- Existing Roadway Network
- Planned Roadway (2010)
- Proposed Roadway (2010)
- AM/PM
- AM/PM
- AM/PM
- Peak Hour Traffic Volumes
- Average Daily Traffic Volumes

Figure 13
 Future Conditions With Development (2010) - Alternative I
 (without Lenah Loop Road)
 AM/PM Peak Hour Traffic Volumes

IF PAID FOR
 DATE LAST REQUIRED

February 15, 2008

Attachment 4



Legend

- Existing Roadway Network
- Planned Roadway (2010)
- Proposed Roadway (2011)
- Peak Hour Traffic Volumes
- Average Daily Traffic Volumes

Figure 15
 Future Conditions With Development (2011)
 AM/PM Peak Hour Traffic Volumes

February 15, 2008



Future Conditions with Development Capacity Analysis

Capacity analyses were performed at the intersections contained within the study area during the weekday morning and afternoon peak hours, under the future with development conditions. Intersection capacity analyses were performed using *Synchro version 6* based on the latest Highway Capacity Manual (HCM 2000) data and methodology.

Alternative 1: Without Lenah Loop Road Connection to the School Property (2010)

The results of the intersection capacity analyses for the future with development conditions are summarized in **Table 4**. The description of the different LOS and delay and the detailed analysis worksheets for the future conditions with development (2010) are included in the Technical Appendix.

Table 4: Future Conditions with Development (2010) Intersection Capacity Analysis- (Alternative 1)

Intersection (Approach/Movement)	Total Future Conditions (2010)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
US Route 50 and Lenah Road				
Overall (Signalized)				
Eastbound Approach	D	36.1	D	39.8
Westbound Approach	D	48.7	B	17.5
Northbound Approach	A	4.8	D	51.0
Southbound Approach	D	52.7	D	43.4
	D	36.6	D	42.4
Lenah Road and Lenah Run Circle North				
Overall (Unsignalized)				
Eastbound Approach	N/A	N/A	N/A	N/A
Northbound Left	B	11.1	A	9.8
	A	0.0	A	0.6
Lenah Road and Lenah Run Circle South and Site Drive #1				
Overall (Unsignalized)				
Eastbound Left	N/A	N/A	N/A	N/A
Westbound Left	A	0.5	A	0.4
Northbound Approach	A	2.6	A	0.5
Southbound Approach	B	11.2	A	9.5
	B	11.9	B	9.9
Lenah Road and Braddock Road				
Overall (Unsignalized)				
Eastbound Left	N/A	N/A	N/A	N/A
Westbound Left	B	11.5	A	10.0
Northbound Approach	B	13.4	B	10.2
Southbound Approach	A	0.4	A	0.8
	A	5.7	A	3.2
US Route 15 and Braddock Road				
Overall (Signalized)				
Westbound Approach	A	4.5	A	9.4
Northbound Approach	D	40.4	D	39.5
Southbound Approach	A	3.7	A	3.0
	A	2.1	B	11.1



Future Conditions with Development (2011)

The results of the intersection capacity analyses for this phase are summarized in Table 6. The detailed analyses worksheets are provided in the Technical Appendix.

Table 6: Future Conditions with Development (2011) Intersection Capacity Analysis

Intersection (Approach/Movement)	Total Future Conditions (2011)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec./veh)	LOS	Delay (sec./veh)
US Route 50 and Lenah Road				
Overall (Signalized)	E	68.2	D	48.1
Eastbound Approach	F	87.2	C	20.4
Westbound Approach	B	10.5	E	62.6
Northbound Approach	F	119.4	D	43.4
Southbound Approach	C	34.5	D	41.2
Mitigation (Add Northbound and Eastbound Right Turn Lanes)				
Overall (Signalized)	D	38.2	D	38.8
Eastbound Approach	D	46.1	B	11.9
Westbound Approach	C	24.2	D	52.5
Northbound Approach	D	39.2	D	37.9
Southbound Approach	D	38.9	D	42.8
Lenah Road and Lenah Run Circle North				
Overall (Unsignalized)	N/A	N/A	N/A	N/A
Eastbound Approach	B	14.8	B	10.5
Northbound Left	A	0.0	A	0.3
Lenah Road and Lenah Run Circle South and Site Drive # 1				
Overall (Unsignalized)	N/A	N/A	N/A	N/A
Eastbound Left	A	0.8	A	0.8
Westbound Left	A	3.1	A	1.1
Northbound Approach	B	14.1	A	9.8
Southbound Approach	C	19.3	B	10.9
Lenah Road and Braddock Road				
Overall (Unsignalized)	N/A	N/A	N/A	N/A
Eastbound Left	B	11.2	A	10.0
Westbound Left	B	11.5	B	10.0
Northbound Approach	A	0.5	A	1.0
Southbound Approach	A	2.6	A	1.7
Lenah Road and Site Drive # 2				
Overall (Unsignalized)	N/A	N/A	N/A	N/A
Eastbound Right-Through Movement	A	0.0	A	0.0
Westbound Left-Through Movement	A	7.4	A	2.7
Northbound Left-Right Movement	B	12.3	A	9.1
US Route 15 and Braddock Road				
Overall (Signalized)	A	5.3	B	10.2
Westbound Approach	D	39.3	D	39.6
Northbound Approach	A	4.3	A	3.1
Southbound Approach	A	2.6	B	12.3

County of Loudoun

Office of Transportation Services

MEMORANDUM



DATE: August 4, 2008

TO: Marchant Schneider, Project Manager, Department of Planning

THRU: Art Smith, Senior Coordinator

FROM: George Phillips, Senior Transportation Planner

AS *GP*

SUBJECT: Loudoun County Public Schools-Lenah Property SPEX 2008-0017 & CMPT 2008-0007 2nd Referral

Location: South and east sides of Lenah Road (Route 600) beginning approximately 1,500 feet south of Route 50.

Background

In response to initial comments from OTS dated May 15, 2008, the applicant, the Loudoun County School Board, has provided a response letter dated June 3, 2008. In addition, the applicant's traffic consultant, Grove/Slade Associates, Inc. has provided a traffic memorandum dated July 16, 2008 in response to VDOT previous comments. The applicant has also provided a revised a special exception plat dated June 4, 2008 from Bowman Consulting, and an updated (June 4, 2008) statement of justification from the applicant. Below are the original OTS comments, the applicant's latest response and an indication as to whether the issue has been adequately addressed.

Transportation Comments

1. While a roundabout was considered by VDOT at the Route 50/Lenah Road intersection, funding has not been approved. Therefore, in order to facilitate safe travel on Route 50 and accommodate the anticipated site traffic turning onto Lenah Road from Route 50, intersection improvements are necessary. These could take the form of the roundabout or new left and right turn lanes. A traffic signal is shown to be needed. Currently, no funds are available for the design and installation of this signal. **The applicant notes that they want to review the Route 50/Lenah Road intersection improvements and funding with OTS. OTS agrees that more discussion is needed. A final decision will be made upon further consideration of the available traffic data and VDOT's recommendations.**
2. At the present time, the proposed site is served by the unpaved Lenah Road south to Braddock Road. The traffic study notes that a majority of the over 4,900 daily vehicle trips will access the site to and from the south via Braddock Road. The applicant's traffic study also notes that Greenvest LLC is to provide a portion of the Lenah Loop Road between Braddock Road and the site as a two lane undivided road. The SBPL 2008-0002, Lenah, does show a new road, Lenah Village Drive, running along the planned Lenah Loop Road alignment and serving the schools. If this road segment is not in place, the applicant will need to provide this paved connection or investigate paving existing Lenah Road to the south. **The applicant notes that the purchase of the school site includes the construction of the Lenah Loop Road along the frontage of the proposed school site, including the realignment of the existing east/west portion to create a T- intersection with the Connector Road and the provision of two lanes of the Lenah Loop Road along the east site frontage. The applicant notes that the additional two lanes (for a full four lane undivided section between the northeast corner of the site and Tall Cedars Parkway) should be provided by the properties on the east side. OTS notes that the anticipated development density on the east would not justify construction of the other two lanes and is concerned that they would not be provided. The Loudoun County transportation model indicates that, with the full CTP in place plus changes including having the Lenah Loop Road terminate at the future Route 659 Relocated in Loudoun County, the segment of the Lenah Loop Road adjacent to the eastern boundary of the site south of existing Lenah Road would carry approximately 8,200 daily vehicle trips. More discussion is needed.**

3. In order to facilitate the construction of the planned Lenah Loop Road along the eastern boundary of the site, the applicant needs to dedicate 35 feet of right of way along the full eastern property edge plus provide all necessary construction related easements including drainage, utility and grading easements. Additional right of way also needs to be dedicated to accommodate separate right and left turn lanes at the planned Lenah Loop Road/Tall Cedars Parkway intersection. **The applicant has agreed to provide all necessary right-of- way and construction related easements. The applicant notes that the CPAP for the Lenah Connector Road already includes the 70 foot right of way for this planned four lane undivided roadway. Issue adequately addressed.**
4. In the event the applicants for the Lenah subdivision 2008-0002 do not construct the Lenah Loop Road, the applicant needs to provide construction of two paved lanes of the Lenah Loop Road along the frontage of their site which would include the realignment of the existing east-west portion of Lenah Road into the Lenah Loop Road. This also includes turn lanes at the proposed site entrance at future Tall Cedars Parkway. If the two lane on-site and off-site construction of the Lenah Connector is constructed by others south to Braddock Road, then the applicant should provide the other two lanes along their site frontage and two lanes north to Route 50. **The applicant responded similar to Comment #2 above. Further discussion is needed.**
5. If not provided under SBPL 2008-0002, the applicant needs to provide two paved lanes along the full frontage of existing Lenah Road plus all VDOT required turn lanes at the proposed site entrances. **The applicant notes that the site plan for the proposed school will include frontage improvements along existing Lenah Road plus any required turn lanes at the proposed site entrances. Issue adequately addressed. The applicant wants to discuss the extent and phasing of the frontage improvements on Lenah Road given the location of an existing pond. Further discussion is needed.**
6. The applicant needs to provide pedestrian/bike trail facilities parallel to existing Lenah Road and the Lenah Loop Road along the site frontage. **The applicant notes that an 8 foot wide trail will be provided along existing Lenah Road. OTS recommends that a 10 foot wide trail within a 14 foot wide public easement be provided to meet AASHTO standards. Second, the applicant notes that the Lenah Loop Road is being constructed by the owner of the property. OTS has checked the initial construction plans for the Lenah Loop Road segment adjacent to the proposed school site under CPAP 2008-0060 and notes that 5 foot wide sidewalks are proposed on each side.**

OTS will recommend under this CPAP application that 10' wide trails within 14' wide easements be provided.

- 7. The number of parking spaces shown on the concept plan seems high. What are the Ordinance parking requirements for the two schools combined? Please clarify. OTS defers to the Department of Building & Development of Building & Development on this possible issue. The applicant notes that the parking areas depicted on the SPEX plat are consistent with other middle and high school locations which their experience has shown is needed. The applicant also notes that the current zoning ordinance parking standards are inadequate and that the additional spaces are needed for events including back to school nights, school plays, sporting events etc. The applicant notes that a shortage of parking has resulted in surrounding neighborhoods being affected. Based on the applicant's response, OTS has no issue with the proposed number of parking spaces. However, please note that the Loudoun County Department of Building & Development has the final word on this issue.**
- 8. The applicant's initial traffic study includes assumptions which need further discussion and understanding before they can be used by OTS for making decisions regarding transportation infrastructure for the school. First, the distribution of 55% of the proposed school traffic to/from the south and east on Braddock Road presents a problem in that portions of Braddock Road to the east are not paved. OTS believes that the majority of site traffic would access via Route 50. However, if the applicant believes the distribution included to be accurate, then what steps will be taken to improve Braddock Road to the east of the Lenah Connector Road? In addition, the amount of background traffic assumed on Route 50 between the existing 2007 traffic (approximately 12,600 daily east of Lenah Road) counts and the year 2010 (26,700) appear excessive given the relatively short time frame and the current economic market. As such, the recommendations from the study regarding the round about need additional review in light of more realistic background traffic assumptions. Further discussion is needed.**
- 9. The most appropriate improvement (round about, traffic signal with turn lanes, etc.) at the Route 50/Lenah Road intersection needs to be determined in light of this application. Engineering and cost alternatives need to be developed and reviewed. VDOT must ultimately approve these**

transportation improvements. Further discussion and work is needed to move forward. This will entail additional analysis.

Conclusion/Recommendation

The following transportation improvements are needed to serve the schools upon their openings:

- A paved Lenah Road to the schools entrances and a paved Lenah Loop Road (Lenah Village Drive). Both improvements are shown as being constructed by Greenvest as part of SBPL 2008-0002. However, guarantees need to be in place to make sure the construction will occur in the appropriate time frame.
- Intersection improvements at Route 50/Lenah Road. This would be either a roundabout, which OTS prefers, or turn lanes and a traffic signal. There is currently no funding for these improvements and the proposed fair share contributions by the applicant are inadequate.

Further discussion is needed with the applicant to work out these issues.

The applicant notes that a paved Lenah Road and Lenah Loop Road (2 lanes) will be in place prior to occupancy and that the Route 50/Lenah Road improvements need further discussion. OTS agrees that further discussion and review is needed with all of the above outstanding issues.

C Drive/Lenah/Loudoun County Public Schools/School Board SPEX 2008-0017
2nd referral

From: George Phillips
To: Schneider, Marchant
Date: 9/4/2008 1:25 PM
Subject: Re: Comments for the Lenah Run Middle/High School application SPEX 2008-0017

Marchant- 9/4/08

In light of the discussion we had at our meeting yesterday with CountyAdmin, Planning and OTS staff and the applicant, please utilize this E mail for inclusion in your staff report. Art and I had a chance to review the August 21, 2008 response letter from Sara Howard-O'Brien of the Loudoun Co. School Board staff included in your August 25, 2008 memo to me. Our comments are as follows:

1. For Route 50/Lenah Road intersection improvements, the applicant has provided a comparison summary of three improvement possibilities. These are a traffic signal with left turn lane on west bound Route 50 to southbound Lenah Road, a one lane round about or a two lane round about at the Route 50/Lenah Road intersection. The applicant compared cost, LOS and which improvements could come on line the earliest. The applicant's traffic consultant concludes that the traffic signal would be the least expensive, offer the best LOS and more likely come on line sooner given that either round about will require right of way acquisition.

First, based on the applicant's comparison summary, OTS supports the conclusion that the proposed traffic signal and turn lanes at the Route 50/Lenah Road intersection, as identified in the applicant's traffic study, provides the best option from a Level of service, cost and timing perspective when compared to the roundabout designs. However, the applicant should confirm what, if any, additional right of way would need to be acquired for the signal and turn lanes. This will need to be confirmed at construction plan stage.

The PC and Board need to be aware that traffic projections from the applicant's traffic study for 2020 and the County model for 2030 indicate that Route 50 will need to be widened to a four lane facility from the existing four lane segment west to Lenah Road. This would include a transition from four lanes back to two lanes on Route 50 west of Lenah Road. This is a system problem related to approved land uses and needs long-term CTP and funding decisions beyond this application. Please note that the existing Countywide Transportation Plan (CTP) has not specified a two or four lane section from the existing split west to the Route 50/Lenah Road intersection.

Second, with regard to the applicant's responsibility for the construction of the Lenah Loop Road, OTS agrees that the application justifies the two lanes being in place between Braddock Road and the southern site entrance along with the other improvements on existing Lenah Road. OTS notes that Greenvest LLC will provide the additional construction along the site frontage north to existing Lenah Road including the realignment of existing Lenah Road to provide an east-west T intersection with the Lenah Loop Road. The applicant has already addressed the issue of right-of-way dedication as well. OTS assumes that if the road improvements are not constructed by the Lenah subdivision, that the applicant will commit to construct the needed improvements in a timely manner relative to the projected opening of the schools..

Third, OTS is in agreement that the proposed frontage improvements on Lenah Road should be a full section to the westernmost entrance with a transition back to the existing gravel section. This would also include grading out the road and providing a ditch to the west as recommended by VDOT.

Fourth, OTS continues to recommend 10' wide trails within 14' wide easements on the Lenah Loop Road. These comments, as well as other trail related comments will be addressed as part of the review and approval of CPAP 2008-0060 and the middle school plan. The number and location of parking spaces will also need to be reviewed and approved by B & D as part of site plan approval.

Fifth, with regard to the issue of large amounts of site traffic utilizing unpaved portions of Braddock Road, the applicant has noted several subdivisions which will come on line to eventually pave along their site frontage on Braddock Road east of the Lenah Loop Road. These include Lenah Village, Westport, Braddock Crossing, Kirkpatrick West, Kirkpatrick Farms and Greenfield Crossing. The applicant notes in their response that they expect, with the exception of Westport, that the remaining segments of Braddock Road will be paved prior to the opening of the middle school in 2010. However, documentation is needed to determine the status of the paved road improvements because it is uncertain what unpaved segments of Braddock Road will actually be paved by 2010. Also, 55% of the applicant's site traffic approximately 2,500 daily vehicles is a large amount of traffic to place on an unpaved road segment with an uncertain time for paving.

With regard to the traffic projection issue on Route 50, additional refinement and analysis will depend on future land use

A-45

cooperative forecasts.

Conclusion

OTS finds there are no transportation issues which would preclude approval of this application as long as adequate improvements are provided. These include improvements to the Route 50/Lenah Road intersection, Lenah Road and the Lenah Loop Road prior to the buildout of the two schools.

Let me know if you have any questions.

Thanks, George Phillips

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COMMONWEALTH of VIRGINIA

DAVID S. EKERN, P.E.
COMMISSIONER

DEPARTMENT OF TRANSPORTATION

14685 Avion Parkway
Chantilly, VA 20151
(703) 383-VDOT (8368)

May 23, 2008



Mr. Marchant Schneider
County of Loudoun
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, Virginia 20177-7000

Re: Loudoun County Public Schools – Lenah Property
MS-5 and HS-7
Loudoun County Plan Numbers SPEX 2008-0017 and CMPT 2008-0007

Dear Mr. Schneider:

In accordance with the Virginia Traffic Impact Analysis Regulations, 24 VAC 30-155, the above Special Exception and Commission Permit application and related supplemental traffic analysis were received by the Virginia Department of Transportation (VDOT) for review on April 8, 2008.

We have evaluated the plan and related supplemental traffic analysis and prepared final comments on the results of our evaluation. The comments present our key findings as well as detailed comments on the future transportation improvements which will be needed to support the current and planned development in the study area.

Our comments are attached to assist the Loudoun County Department of Planning in their decision making process regarding the application.

Please arrange to have these final comments included in the official public records, and to have both this letter and the VDOT comments placed in the official file for this application. VDOT will make these documents available to the public through various means, and may post them to the VDOT website.

If you have any questions, please call me at (703) 383-2061.

Sincerely,

A handwritten signature in black ink, appearing to read "JB" with a long horizontal flourish extending to the right.

John Bassett, P.E.
Transportation Engineer

Cc: Imad Salous, P. E.



COMMONWEALTH of VIRGINIA

DAVID S. EKERN, P.E.
COMMISSIONER

DEPARTMENT OF TRANSPORTATION

14685 Avion Parkway
Chantilly, VA 20151
(703) 383-VDOT (8368)

May 23, 2008



Mr. Marchant Schneider
County of Loudoun
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, Virginia 20177-7000

Re: Loudoun County Public Schools – Lenah Property
MS-5 and HS-7
(1st Submission)
Loudoun County Plan Number SPEX 2008-0017 and CMPT 2008-0007

Dear Mr. Schneider:

We have reviewed the above noted plan and supplemental traffic analysis as requested in your April 3, 2008 transmittal and the April 8, 2008 Chapter 527 transmittal. We offer the following comments:

1. Please see the attached e-mail and its associated memorandum dated 04/30/2008 from Mr. Arsalan (Alex) Faghri of VDOT's Traffic Engineering Section.
2. Please see the attached e-mail dated 5/12/2008 from Mr. Cina Dabestani of VDOT's Transportation Planning Section.
3. Lenah Road, Route 600 should be constructed to the appropriate VDOT Geometric Standard (GS) along this site's entire frontage.
4. Lenah Road Connector should be constructed as specified (U4) in the Loudoun *Countywide Transportation Plan (CTP)* through the limits of this property if it is not in place by the school(s) planned opening date.
5. This applicant should construct or contribute significantly to the following road improvements as concluded in the associated Traffic Impact Study (TIS) dated February 15, 2008 in order that they be in place by the school(s) planned opening date:

- (a) Intersection of Route 50 and Lenah Road - Add traffic signal
- (b) Intersection of Route 50 and Lenah Road – Add westbound left turn lane
- (c) Intersection of Route 50 and Lenah Road – Add eastbound right turn lane
- (d) Intersection of Route 50 and Lenah Road – Add northbound right turn lane
- (e) Intersection of Route 50 and Lenah Loop Road – Add eastbound through lane
- (f) Intersection of Route 50 and Lenah Loop Road – Add westbound through lane
- (g) Intersection of Route 15 and Braddock Road, Route 620 - Add Traffic signal
- (h) Intersection of Route 15 and Braddock Road, Route 620 - Add southbound left lane
- (i) Intersection of Braddock Road and Lenah Loop Road – Add traffic signal.

If you have any questions, please call me at (703) 383-2061.

Sincerely,

A handwritten signature in black ink, appearing to read 'J Bassett', with a long horizontal flourish extending to the right.

John Bassett, P.E.
Transportation Engineer

Attachments

Cc: Imad Salous, P. E.

Bassett, John

From: Faghri, Arsalan
Sent: Wednesday, April 30, 2008 7:46 AM
To: Bassett, John
Cc: Suliman, Kamal S.
Subject: RE: RUID 9281 – Rt 50 and Lenah Road – Loudoun County Public Schools

Attachments: RUID 9281 – Rt 50 and Lenah Road – Loudoun County Public Schools.doc

John,

Considered as “correct and resubmit”, attached please find our comments associated with the TIA for the subject location.

If you have any questions please feel free to contact me.

Thanks.

Alex



RUID 9281 – Rt 50
and Lenah Ro...

Arsalan (Alex) Faghri Traffic Engineering 703.383.2054  Virginia Department of Transportation Northern Virginia District
--

Memorandum

To: John Bassett, P.E.

From: Arsalan (Alex) Faghri

CC: Kamal S. Suliman

Date: 04/30/2008

Re: Plan SPEX 2008-0017 / CMPT 08-0007

RUID 9281 – Rt. 50 and Lenah Road – Loudoun County Public Schools

APR 29 2008

We have reviewed first submission Traffic Impact Analysis (TIA) associated with the subject location. The TIA assesses traffic impacts for a middle school and a high school proposed for the Lenah area of Loudoun County on Lenah Road south of Rt. 50 and North of Braddock Road. The school will have total student population of 3150 students which will be served by an additional 340 employees. The total property size is approximately 99.9 acres. The middle school is expected to have a build-out year of 2010 and the high school is expected to be operational by 2011.

We offer the following comments associated with the TIA:

1. Why "number of employees" was not considered as the parameter to determine the traffic generation numbers?
2. All signal warrant analyses should use "urban" thresholds.
3. Considering majority of vehicles accessing site driveways (Intersections 4, 7, and 8) will be school buses, passenger car equivalency factor should be applied when determining warrants for left and right turn lanes. The number of school buses affect the critical gap and follow-up time ensuing longer delays and queues at these intersections.
4. Judging by the aerial photo, Intersection 1 (Braddock road and Rt. 15) does not have a separate northbound right turn lane. The Synchro model, however, shows an extended right turn lane at his approach. Please fix the model to show the correct lane configuration.
5. The southbound right turn lane at Intersection 3 (Lenah Road and Lenah run Circle North) does not extend all the way to the upstream intersection. Please input the correct turn bay length in Synchro.

6. LOS information is wrongly depicted on Figure 5 for Intersections 1, and 2. The information on Table 1 which contains the LOS information for existing conditions is accurate; however, Figure 5 which is the graphical representation of existing LOS is not accurately shown.
7. Figures E-1 thru E-5 show traffic generated by other developments with approved TIAs in the neighboring area. Please show the location of these future developments with respect to the site.
8. Appendix J node 12 (Rt. 50 and Lenah) 2010 TF PM (with Lenah Loop Road Connection) scenario shows LOS E for the WBT movement. Mitigation measures should be provided to improve LOS at any movement below LOS D.
9. Appendix K node 12 (Rt. 50 and Lenah) 2011 TF AM scenario shows LOS F for EB, NB and total intersection LOS, however Figure 20 shows LOS D or better. Please verify that the LOS are depicted correctly on figures.
10. Appendix K node 12 (Rt. 50 and Lenah) 2011 TF PM scenario shows LOS E for the WBT movement as well as the EB approach. Mitigation measures should be provided to improve LOS at any movement below LOS D.
11. Appendix K node 12 (Rt. 50 and Lenah) 2011 TF AM (mitigated) scenario shows LOS E for the WBL movement. Mitigation measures should be provided to improve LOS at any movement below LOS D.

We have stamped the study as **correct and resubmit**. We are retaining one copy for our records and returning one copy via interoffice mail. Please call if you have any questions.

Bassett, John

From: Dabestani, Cina
Sent: Monday, May 12, 2008 1:55 PM
To: Bassett, John
Cc: Llana, Claudia, P.E.
Subject: Loudoun county Public Schools (Lenah Run - MS-5 and HS-7) TIS Review & Comments

John:

Thanks for providing TP with the opportunity to review and offer comments on Loudoun county Public Schools located off of Lenah Road submitted by Grove/Slade Associates dated February 15, 2008.

1- Existing counts (2007) at US 50 and Lenah Road seem low. Other studies within vicinity of this study area (Lenah Property submitted by Wells & Associates) are showing higher turning volumes for January 2008 actual counts. Update the existing counts accordingly or provide a set of fresh counts.

2- Show locations of the background developments (appendix E shows the trips generated at each intersection of this study area but it is not showing the location of each background development). Lenah Property development is right next to this development and is missing from the provided list of background developments since it is not approved yet however it needs to be added for it has direct impact on the same roadways.

3- Provide map showing school district's boundary and if possible superimpose it on Loudoun County's TAZ map showing land use for 2010, 2011, and 2020 to identify and document the distributions more accurately.

Once again thanks for the opportunity to review and comment.

Cina

August 27, 2008

Mr. Marchant Schneider
County of Loudoun
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, Virginia 20177-7000

Re: Loudoun County Public Schools – Lenah Property
MS-5 and HS-7
(2nd Submission)
Loudoun County Plan Number SPEX 2008-0017 and CMPT 2008-0007

Dear Mr. Schneider:

We have reviewed the above noted application and supplemental traffic analysis as requested in your July 20, 2008 transmittal and pursuant to a meeting on held August 5, 2008. We offer the following comments:

1. Please see the attached e-mail and its associated memorandum both dated 08/26/2008 from Mr. Arsalan (Alex) Faghri of VDOT's Traffic Engineering Section. Please note in particular, comment # 3.c.iii which indicates that exclusive left turn lanes are warranted on Lenah Road at both of the site access points.
2. Please see the attached e-mail dated Friday, August 08, 2008 from Mr. Cina Dabestani of VDOT's Transportation Planning Section.
3. At the August 5, 2008 meeting, it was agreed that Lenah Road, Route 600 should be constructed to the appropriate VDOT Geometric Standard (GS) as a full standard typical section from the Lenah Connector to the site's second, westernmost access point.
4. Related to comment # 3: It was also agreed that the applicant would dedicate right of way 25' from centerline on Lenah Road, Route 600 along the entire site frontage.

5. Lenah Road Connector is specified as *U4* typical section in the Loudoun *Countywide Transportation Plan (CTP)* from Tall Cedars Parkway to Route 50. It is our understanding that the ultimate 70' right of way dedication and a 2-lane section is proposed "By Others" from Braddock Road, Route 620 to Lenah Road (Realigned). We recommend the County pursue the third lane (i.e., the southbound lane on the western side of the road) through the limits of this property from this applicant.
6. This applicant should provide the following road improvements by the school(s) planned opening date:
 - (a) Intersection of Route 50 and Lenah Road - Add traffic signal
 - (b) Intersection of Route 50 and Lenah Road – Add westbound left turn lane
 - (c) Intersection of Route 50 and Lenah Road – Add eastbound right turn lane
 - (d) Intersection of Route 50 and Lenah Road – Add northbound right turn lane
 - (e) Intersection of Braddock Road and Lenah Connector (aka, Lenah Loop Road) – Monetary contribution towards traffic signal.
7. Please provide a copy of the draft proffers to this office for review.

If you have any questions, please call me at (703) 383-2061.

Sincerely,

John Bassett, P.E.
Transportation Engineer

Attachments

Cc: Imad Salous, P. E.

From: Dabestani, Cina
Sent: Friday, August 08, 2008 12:50 PM
To: Bassett, John; Faghri, Arsalan
Cc: Turner, Jim R.; Llana, Claudia, P.E.
Subject: RE: Loudoun County Public Schools - Lenah Property (2nd Submission); SPEX 2008-0017 and CMPT 08-0007

John:

I reviewed the second submission and find my comments addressed with one exception (perhaps a clarification is needed?!).

Appendix D shows a map depicting Traffic Analysis Zones boundary for this study but I asked for a map showing "school district boundary" on Loudoun County's TAZ. Please ask for correction of this map.

I like to reserve any further comment upon this correction.

Thanks,
Cina

From: Bassett, John
Sent: Monday, August 04, 2008 2:10 PM
To: Faghri, Arsalan; Dabestani, Cina
Cc: Turner, Jim R.; Llana, Claudia, P.E.
Subject: Loudoun County Public Schools - Lenah Property (2nd Submission); SPEX 2008-0017 and CMPT 08-0007

A plan has been transferred to you for review as follows:

Plan Numbers: SPEX 2008-0017 and CMPT 08-0007 **(2nd Submission)**
Project Name: Loudoun County Public Schools Lenah Property
Revision Type: Special Exception and Commission Permit

The above noted special exception and commission permit is subject to Chapter 527 review, VDOT due date 9/11/2008, Land Track record # 53-50-20080728-227.

This is a second submission application. The Engineer has provided responses to first submission VDOT comments in the body of the attached Traffic Impact Study (TIS) dated July 16, 2008.

FMS charges are CSC #1207009 Activity # 969 WAS Indicator #00042.

A-58

From: Faghri, Arsalan
Sent: Tuesday, August 26, 2008 5:24 PM
To: Bassett, John
Cc: Turner, Jim R.; VanPoole, Thomas B., P.E.
Subject: Re: RUID 10087 – Rt 50 and Lenah Road – Loudoun County Public Schools

Attachments: RUID 10087 – Rt 50 and Lenah Road – Loudoun County Public Schools.doc

John,
Attached please find our comments associated with the TIA for the above application.
If you have any question please feel free to contact me.
Thanks.
Alex



RUID 10087 – Rt 50
and Lenah R...

AGH

SR TRANSPORTATION ENGINEER

VDOT NOVA LAND DEVELOPMENT

Memorandum

To: John Bassett, P.E.

From: Arsalan (Alex) Faghri

CC: Jim R. Turner, P.E.

Date: 08/26/2008

Re: Plan SPEX 2008-0017 / CMPT 08-0007

RUID 10087 – Rt. 50 and Lenah Road – Loudoun County Public Schools

We have reviewed the responses to our comments to the first submission Traffic Impact Analysis (TIA) associated with the subject location. The document is dated July 16, 2008. We offer the following:

1. On Page 3 of the response document, the engineer fails to discuss/address the northbound right turn lane at the intersection of Rt. 50 and Lenah Road. This turn lane has been identified as a planned/recommended improvement due to site in the February 15, 2008 TIA. Please ensure this movement is included as a needed movement as a result of site generated traffic.
2. Per Traffic Impact Analysis Regulations Administrative Guidelines, mitigation measures should be recommended for any movement with a LOS D or worse. The TIA appendix K "2011 TF Mitigated" for AM and PM Peak hours show LOS E for node 12 (Rt. 50 and Lenah Rd). This is a repeat comment. In the engineer's response to comments 15 and 16 we are referred to Appendices I and J which are irrelevant to this discussion. Please check your work/response before submittal.
3. We disagree with the response given to Comment 9 which suggests using Passenger Car Equivalency (PCE) factor to the turning volumes along the three site driveways (intersections 4, 7, and 8) when performing turn lane warrant analysis. We made that comment because majority of the volumes using these driveways would be school buses. We disagree for the following reasons:
 - a. Applying the PCE factor in situations where significant amount of truck traffic is present is standard procedure for capacity analyses recommended by the Highway Capacity manual. A factor of 1.5 is recommended for extended general highway segments on level terrains.
 - b. The discussion provided by the engineer for critical gap is unjustifiable and irrelevant. Furthermore, increasing critical gap and follow-up time in Synchro

by 25% wouldn't indicate if a turn lane is warranted and therefore is inapplicable. VDOT Road Design Manual Turn lane warrant analysis should be performed to determine if a turn lane is warranted.

- c. Appendix N "Turn Lane Warrants" in the February 2008 TIA is incorrect because:
 - i. On two lane roadways where there are no turn lane pockets, "Advancing Volume" and "Opposing Volume" includes the right and left turn lane volumes. It is not just the thru volumes. Please make sure all movements are included in the analysis.
 - ii. We were not able to verify the 87 veh./hour Opposing Volume in the analysis of 2011 TF for Lenah Road and School Entrance West (WBL). Please make sure correct volumes are used in the analysis.
 - iii. Even if PCE factor is not used, which we still strongly recommend to be used for consistency and accuracy, a WBL at intersection 4 and Intersection 7 is warranted. Please revise the analyses and resubmit.

The TIA should be revised per comments above and resubmitted in its entirety. Please call if you have any questions.



**COUNTY OF LOUDOUN
PARKS, RECREATION AND COMMUNITY SERVICES
REFERRAL MEMORANDUM**

To: Marchant Scheneider, Project Manager
Department of Planning

From:  Mark A. Novak, ASLA, Chief Park Planner, Facilities Planning and Development

CC: Diane Ryburn, Director
Steve Torpy, Assistant Director
Su Webb, Park Board, Chairman
Steve Hines, Park Board, Dulles Ridge District

Date: May 6, 2008



Subject: SPEX 2008-0017 – CMPT 2008-0007 Loudoun County Public Schools – Lenah Property

Election District: Dulles **Sub Planning Area:**

MCPI # 286-27-9903, 286-28-5608, 286-29-1615, 286-18-3739, 287-48-0949, 287-37-7275, 287-39-884

BACKGROUND:

Loudoun County Public School (LCPS) is seeking a Commission Permit and Special Exception to allow a middle school (MS-5) and high school (HS-7). The site is located on Lenah Road (Route 600), south of Route 50. The Property consists of 99.9 +/- acres, and is zoned TR1UBF (*Transitional Residential - 1 (Upper Broad Run and Upper Foley)*): Sub-district of TR1 without central utilities. Residential with cluster (50% open space); 1.0 du/acre), within the Dulles Election District. The northern most portion of the Property is in the Floodplain Overlay District (FOD). A portion of the property is also within the Ldn 60 of Dulles Airport and within one mile of the Ldn 60 AI, Airport Impact Overlay District.

POLICY:

The site is governed under the land use policies in the Revised General Plan, Revised 1993 Zoning Ordinance, Loudoun County Bicycle and Pedestrian Mobility Master Plan, and the Revised Countywide Transportation Plan (Revised CTP). The subject site is located within the Transition Policy Area of the Upper Broad Run subarea. The Planned Land Use Map adopted with the Revised General Plan

identifies the subject site as *Transition Area*, which encourages non-residential use that provides a transition from suburban to rural.

PROJECT ANALYSIS:

The Loudoun County Public Schools program for a middle school includes a building of approximately 160, 000 square feet with a student capacity of 1350 and three recreational playing fields (two soccer and one softball). The program for a high school includes a building of approximately 1270, 000 square feet with a student capacity of 1800 and various recreational and athletic facilities including a high school football stadium, concession stands, ticket booths, storage buildings, a field house, baseball dugout and various athletic fields for both the physical education program and competition. The planned opening for the middle school (MS-5) is fall of 2010, and the planned opening for the high school (HS-7) is fall of 2011.

COMMENTS:

With respect to Parks, Recreation and Community Services (PRCS) we offer the following comments and recommendations:

1. The Department of Parks, Recreation and Community Services has enjoyed a long-standing collaboration with Loudoun County Public Schools that allows the use of certain school facilities for PRCS programs. We appreciate that cooperative agreement and hope it continues since it is clearly consistent with the Revised General Plan policy that states school sites should be "*community assets and the focal point for active recreation and after-school programs*".
2. PRCS supports the School Policies under the Fiscal Planning and Public Facilities of the Revised General Plan in which, "*School - related open space and athletic fields will be planned, designed and coordinated with the County's parks and recreation programs and facilities through a referral process.*"
3. PRCS strongly supports any efforts to protect and preserve wetlands, trees, and native vegetation because these contribute directly to protecting the health of surface water, groundwater, air quality, and aesthetics – all of which contribute to the health of the community's residents. We recommend that any substantial "tree save" area has a Forest Management Plan that addresses the use, maintenance, target vegetation, wildlife management goals and methods, and other aspects of sustaining a functional and attractive

natural area. The management plan should address how multiple layers – overstory, understory, shrub and herbaceous layers – will be maintained to ensure the health and functionality of the vegetated open space.

CONCLUSION/RECOMMENDATION:

PRCS would not be in objection to a favorable recommendation for approval on this application.

If you have any questions or concerns regarding these comments, please do not hesitate to contact me personally via phone at 703-737-8992, or via e-mail at mark.novak@loudoun.gov. I look forward to attending any meetings or work sessions to offer PRCS support, or to be notified of any further information regarding this project.

April 15, 2008



Marchant Scheider
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, VA 20177-7000

Re: SPEX – 2008-0017, CMPT-2008-0007; Loudoun County Public School Lenah Property

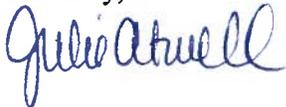
Dear Mr. Scheider:

Loudoun Water has reviewed the referenced application and the following comments are provided for your use:

- Offsite water and sewer improvements are required in order for public water and sewer to be extended to the property.
 - a. The construction plans for these offsite improvements have not been approved by Loudoun Water.
 - b. Required bonds have not been posted with Loudoun Water for these offsite improvements.
 - c. Required easements have not been dedicated to Loudoun Water.
- Should offsite easements be required to extend public water and/or sanitary sewer to this site, the applicant shall be responsible for acquiring such easements and dedicating them to Loudoun Water at not cost to the County or to Loudoun Water.

Should you have any questions, please contact Paul Bodkin, of this office.

Sincerely,



Julie Atwell
Engineering Administrative Specialist

A-65



From: "Danielson, Todd" <tdanielson@loudounwater.org>
To: "Marchant Schneider" <Marchant.Schneider@loudoun.gov>
CC: "Atwell, Julie" <jatwell@loudounwater.org>, "Bodkin, Paul" <pbodkin@loud...>
Date: 5/2/2008 12:00 PM
Subject: Lenah Road Schools, SPEX-2008-0017, CMPT-2008-0007

Dear Mr. Schneider,

This email is written as a supplement to our April 15, 2008 letter regarding the Lenah Road Schools, SPEX-2008-0017 and CMPT-2008-0007.

The subject property is located across the road from the Lenah Run subdivision, where Loudoun Water operates a community water system, and the property is located within the wellhead protection area for the Lenah Run subdivision. As such, activities on the property have the potential to impact the quality of the source water for Lenah Run. Hence, Loudoun Water requests that all construction and operations activities on the property follow best management practices for groundwater protection. This includes BMPs for storm water control during construction and operations such as low impact development (LID)-style bioretention basins, the use of "smart controllers" if irrigation systems are installed, and turf management best practices regarding fertilization and pesticide/herbicide applications. Other best management practices may also be appropriate.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,
Todd Danielson

Please note new contact information below and the new email address:
tdanielson@loudounwater.org

Todd Danielson, P.E., BCEE

Manager of Community Systems

Loudoun Water

44961 Loudoun Water Way

PO Box 4000 | Ashburn, VA 20146

Tel 571.291.7835 | Fax 703-726-0684

www.loudounwater.org

June 11, 2008



Marchant Scheider
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, VA 20177-7000

Re: SPEX – 2008-0017, CMPT-2008-0007; Loudoun County Public School Lenah Property

Dear Mr. Scheider:

Loudoun Water has reviewed the referenced application and could provide public water and sanitary sewer service to this site through extension of existing facilities. The following comments are provided for your use:

1. Show location of all proposed/existing water and sewer lines.
2. If water main will be extended in Lenah Road, show connection to existing 8" water main in Lenah Run Circle.
3. Label which plans existing water and sanitary sewer is proposed with.
4. Extend water and sanitary sewer easements to adjacent properties.
5. Provide a 15' sanitary sewer easement along drainage swale at northwest corner of property to accommodate sanitary sewer drainage area from the west.

Public water and sanitary sewer service would be contingent upon the developer's compliance with Loudoun Water's Statement of Policy; Rates, Rules and Regulations; and Design Standards.

Should you have any questions, please contact Paul Bodkin, of this office.

Sincerely,

Julie Atwell
Engineering Administrative Specialist

A-67



From: "Danielson, Todd" <tdanielson@loudounwater.org>
To: "Marchant Schneider" <Marchant.Schneider@loudoun.gov>
CC: "William Marsh" <William.Marsh@loudoun.gov>, "Atwell, Julie" <jatwell@lo...>
Date: 8/19/2008 2:14 PM
Subject: RE: Lenah SPEX Comments

Marchant,

As a follow-up to my voice mail message yesterday and verbal discussions with William Marsh, I am sending this email to document Loudoun Water's desire that the proposed schools not impact the quantity and quality of groundwater available for the community of Lenah Run. From discussions with Mr. Marsh, I am led to believe that the revisions have not addressed my original concerns stated in my May 2, 2008 email to you. Loudoun Water requests that stormwater be managed in a manner that appropriately treats the water and allows it to percolate into the ground, thereby recharging the groundwater. Also, Loudoun Water requests the school follow best management practices to mitigate potential pollutant impacts from activities within the property such as athletic field management and bus parking. Additionally, Loudoun Water has learned that the school is considering installing a well for irrigation purposes. If this is the case, Loudoun Water requests placement and/or pumping rates that do not impact the Lenah Run wells and adherence to best management irrigation practices that minimize watering. Alternately, the school may want to consider artificial turf for their athletic fields. Should the quality or quantity of groundwater change if the schools proceed, Loudoun Water will work with LCPS to determine if the changes may be attributed to the schools and how to assure that the residents of Lenah Run receive an adequate quantity of water of appropriate quality. Thanks.

Sincerely,
Todd Danielson

Todd A. Danielson, P.E., BCEE
Manager of Community Systems

Loudoun Water
 44961 Loudoun Water Way
 PO Box 4000 | Ashburn, VA 20146
 Tel 571.291.7835 | Fax 703-726-0684
www.loudounwater.org <<http://www.loudounwater.org>>

From: William Marsh [mailto:William.Marsh@loudoun.gov]
Sent: Tuesday, August 19, 2008 1:01 PM
To: Marchant Schneider
Cc: Daniel Csizmar; Gary Clare; Joe Gorney; Neelam Henderson; Ryan Sauder; Danielson, Todd
Subject: Fwd: Lenah SPEX Comments

Marchant,

Here are ERT comments for this application. Gary, I forwarded these comments after accounting for Dan Csizmar's suggestions below. I will be out of the office this afternoon and Wednesday through Friday. I am available after next Tuesday morning for any follow up meeting. Thanks!

William

A-68

From: "Danielson, Todd" <tdanielson@loudounwater.org>
To: "Marchant Schneider" <Marchant.Schneider@loudoun.gov>, "William Marsh" <...>
CC: "Sara Howard-O'Brien" <Sara.HowardOBrien@loudoun.k12.va.us>
Date: 9/2/2008 2:20 PM
Subject: RE: Lenah Schools SPEX 2008-0017 and CMPT 2008-0007 commentresponses

Marchant,

Following our meeting with the Applicant last week and reviewing the conditions of approval, I am satisfied that the Applicant is attempting to address through the design process the concerns Loudoun Water stated regarding their potential impact on groundwater quantity and quality. As mentioned by the Applicant's engineer in the meeting, our concerns will be much better addressed if they are able to direct building runoff through bioretention areas. Thanks.

Todd

Todd A. Danielson, P.E., BCEE

Manager of Community Systems

Loudoun Water

44961 Loudoun Water Way

PO Box 4000 | Ashburn, VA 20146

Tel 571.291.7835 | Fax 703-726-0684

www.loudounwater.org

-----Original Message-----

From: Marchant Schneider [mailto:Marchant.Schneider@loudoun.gov]
Sent: Tuesday, September 02, 2008 1:37 PM
To: William Marsh; Danielson, Todd
Cc: Sara Howard-O'Brien
Subject: Fwd: Lenah Schools SPEX 2008-0017 and CMPT 2008-0007 commentresponses

Gentlemen,

Please substitute the attached conditions of approval for the ones I sent to you last week. They incorporate the changes from our discussion last Thursday.

Thanks again for your assistance.

Marchant

>>> Marchant Schneider 8/29/2008 5:31 PM >>>
William and Todd,

Thanks for meeting yesterday.

I've attached the draft development conditions I will be taking to the Planning Commission. I've also attached the schools responses to your previous comments.

Please review the conditions and Applicant responses against your last review. Most of the development conditions specific to your concerns are near the end of the list.

It would be helpful if you could both follow up with me either by email or formal comment response regarding your impression of these items and whether or not they adequately address your concerns.

A-69

Thanks again for your assistance! Have a great weekend!

Marchant

>>> "Michael Pointer" <mpointer@bowmanconsulting.com> 8/27/2008 3:57 PM

>>> >>>

Marchant, William, and Todd,

Loudoun County Public Schools has asked that we forward the attached review comment responses in advance of tomorrows meeting to make our time together as productive as possible. I apologize for not getting these out to you all sooner. Daren Tagg and Mark Baker will be attending the meeting for Bowman and will bring hard copies of the letters and the exhibit.

Please call if you have any questions. Thanks for your continued assistance with this project.

Michael P. Pointer, ASLA | Principal
Bowman Consulting

124 East Cork Street Winchester, VA 22601
direct: 540.722.2343 | fax: 540.722.5080 | mobile: 540.247.2472
mpointer@bowmanconsulting.com | www.bowmanconsulting.com
<<http://www.bowmanconsulting.com/>>

P - Go Green! Please consider the environment before printing this email.



Loudoun County Health Department

P.O. Box 7000
Leesburg VA 20177-7000



Environmental Health
Phone: 703 / 777-0234
Fax: 703 / 771-5023

Community Health
Phone: 703 / 777-0236
Fax: 703 / 771-5393

April 29, 2008

MEMORANDUM TO: Marchant Schneider, Project Manager MSC # 62
Planning Department, Building & Development

FROM: John P. Dayton MSC #68
Sr. Env. Health Specialist
Division Of Environmental Health

SUBJECT: **SPEX 2008-0017, Loudoun C. Public Schools, Lenah Rd**
LCTM: 47/14, PIN 313485316

This Department reviewed the package provided to this office and the plat prepared by Bowman Consulting Group, dated **Feb. 14, 2008**, and recommends approval with the following comments/conditions to the proposal.

- 1) All the proposed lots and structures are properly served by public water and public sewer.
- 2) All existing wells and drainfields are properly abandoned (Health Department permit required) prior to submission of record plat or razing of the structure, which ever is first.

If further information or clarification on the above project is required, please contact John Dayton at 737-8848.

JPD/JEL/jpd





LOUDOUN COUNTY, VIRGINIA
Department of Fire, Rescue and Emergency Management

803 Sycolin Road, Suite 104 Leesburg, VA 20175
Phone 703-777-0333 Fax 703-771-5359



MEMORANDUM

To: Marchant Schneider, Project Manager
From: Maria Figueroa Taylor, Fire-Rescue Planner
Date: May 12, 2008
Subject: LCPS – Lenah Property
SPEX 2008-0017 & CMPT 2008-0007

Thank you for the opportunity to review the above-captioned application. The Fire and Rescue Planning Staff is not opposed to the application as proposed.

If you have any questions or need additional information, please contact me at 703-777-0333.

C: Project file

